

Aug. 26, 1924:

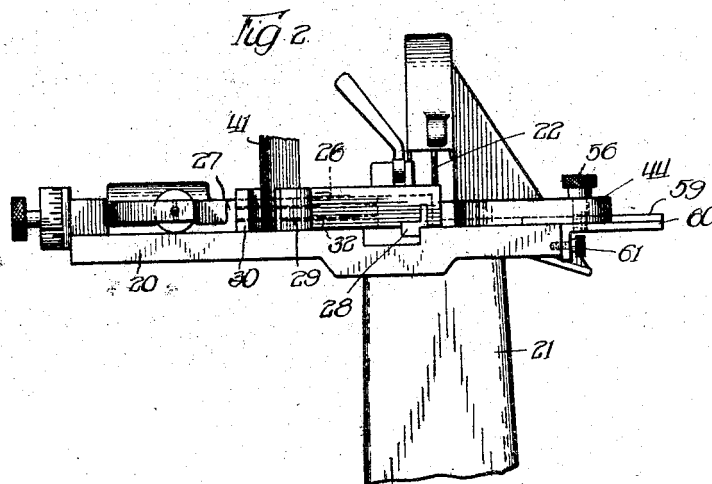
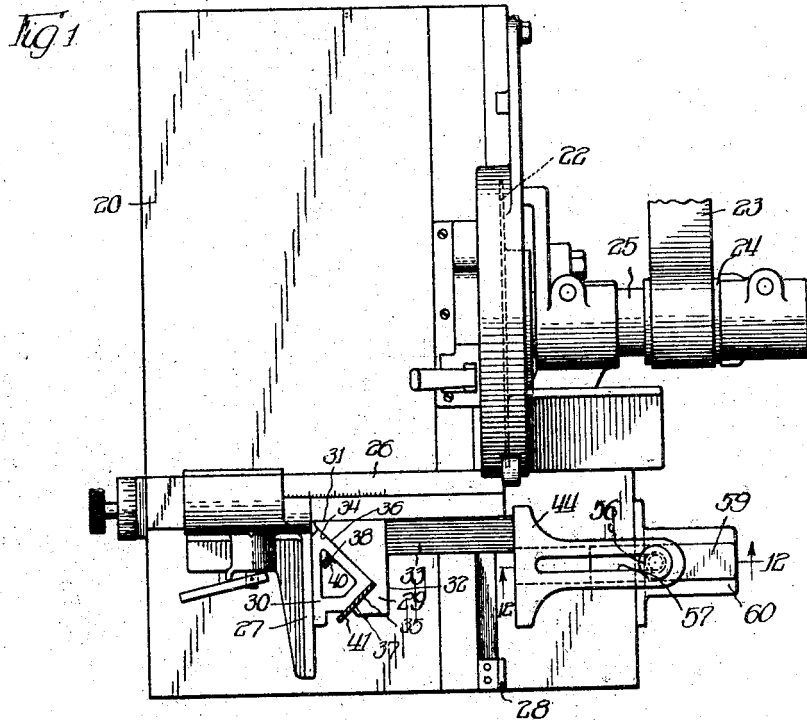
E. CHESHIRE

1,506,407

COMPOSING ROOM SAW MITERING ARRANGEMENT

Filed March 6, 1922

3 Sheets-Sheet 1



Witness:
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Inventor:
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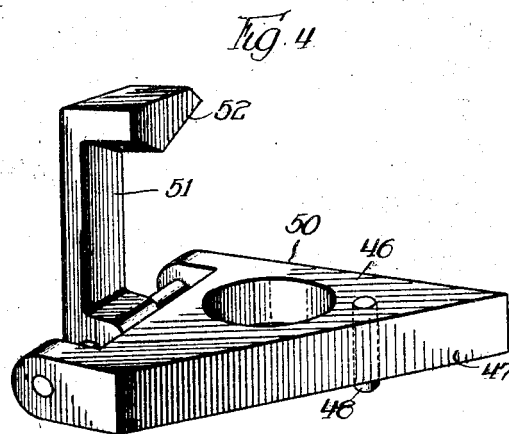
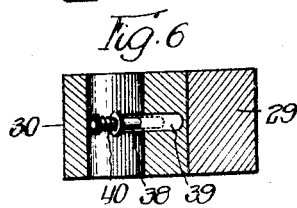
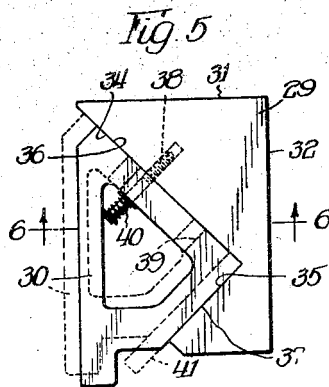
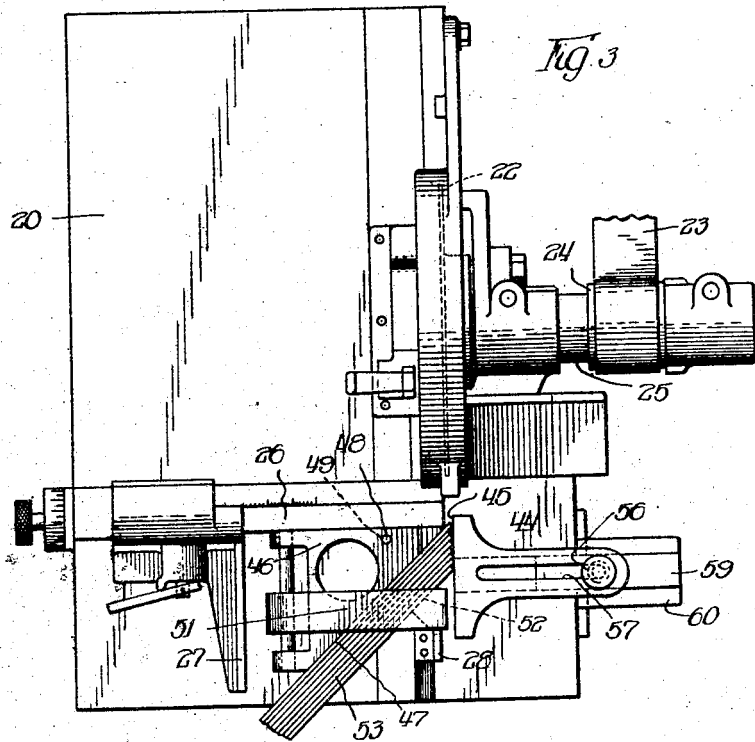
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COMPOSING ROOM SAW MITERING ARRANGEMENT

Filed March 6, 1922

3 Sheets-Sheet 2



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1,506,407

COMPOSING ROOM SAW MITERING ARRANGEMENT

Filed March 6, 1922

3 Sheets-Sheet 3

Fig. 11

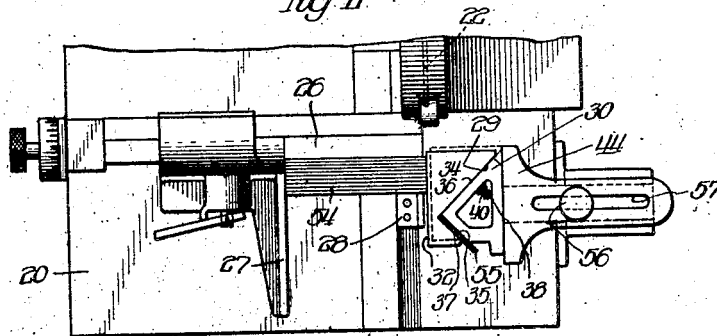


Fig. 12

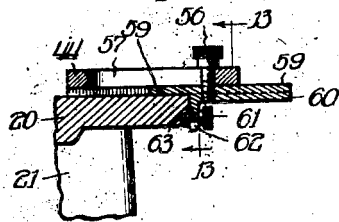


Fig. 13

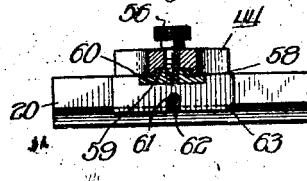


Fig. 7

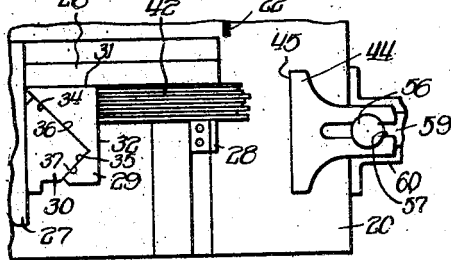


Fig. 8

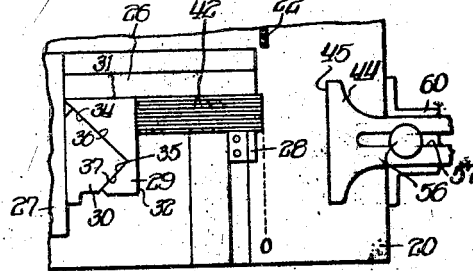


Fig. 9

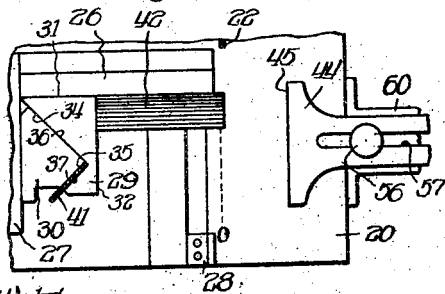
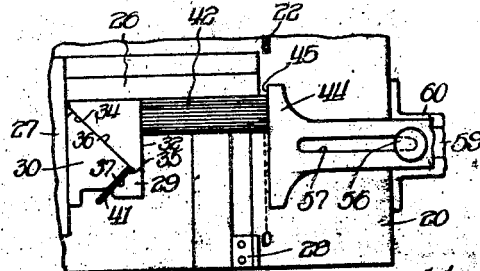


Fig. 10



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UNITED STATES PATENT OFFICE.

EDWARD CHESHIRE, OF BERLIN TOWNSHIP, WAUKESHA COUNTY, WISCONSIN.

COMPOSING-ROOM-SAW MITERING ARRANGEMENT.

Application filed March 6, 1922. Serial No. 541,309.

To all whom it may concern:

Be it known that I, EDWARD CHESHIRE, a citizen of the United States, residing at Berlin Township, in the county of Waukesha and State of Wisconsin, have invented certain new and useful Improvements in Composing-Room-Saw Miterring Arrangements, of which the following is a specification.

10 This invention relates to a composing room saw miterring arrangement.

It is found that borders cast in type casting machines at times vary in thickness from 1/1000 to 5/1000 of an inch from the standard. Accordingly, standard gauges do not always give a setting for accurately miterring.

One object of my invention is to provide simple and reliable means for making an accurate setting for borders and the like so that same may be accurately mitered.

Another object is to provide a simple and efficient composing room saw miterring arrangement which may be quickly manipulated and which is adapted to meet the various requirements for successful commercial use.

These and other objects are accomplished by means of the arrangements disclosed by the accompanying sheets of drawings, in which—

Figure 1 is a top plan view of a composing room saw in combination with my improved means for accurately setting borders and the like to be mitered;

Figure 2 is a fragmentary front elevation of the same;

Figure 3 is a top plan view of a composing room saw showing the borders set in a miterring attachment after the proper setting has been made;

Figure 4 is a perspective view of the miterring attachment shown in Figure 3;

Figure 5 is a detail top plan view of my improved miter setting gauge;

Figure 6 is a sectional view taken in the plane of line 6—6 of Figure 5;

Figures 7, 8, 9 and 10 are diagrammatic views illustrating the manner of use and the different steps in making the proper setting for miterring;

Figure 11 is a fragmentary top plan view of a composing room saw showing the same miter gauge arranged in a different manner for accurately determining a proper setting for borders to be mitered;

Figure 12 is a detail sectional view taken in the plane of line 12—12 of Figure 1; and

Figure 13 is a sectional view taken in the plane of line 13—13 of Figure 12.

The various novel features of my invention will be apparent from the following description and drawings, and will be particularly pointed out in the appended claims.

The invention is illustrated in connection with a composing room saw, including a table 20 mounted upon a pedestal 21, there being a saw 22 associated with the table in a manner such that material carried by the table and properly positioned may be cut by the saw. The saw may be driven from any suitable source through a belt 23 which passes around a pulley 24 mounted on a shaft 25 which carries the saw 22. Material to be cut is pressed into engagement directly or indirectly with a front retaining gauge 26, the upper surface of which is provided with a graduated scale in order to accurately gauge the length of the linotype slugs or other material to be cut. Co-acting with the front retaining gauge is a side gauge including an arm 27. It will be understood that the front retaining gauge 26 also forms a relatively fixed jaw which co-operates with a relatively movable jaw 28 between which material to be cut is clamped.

As mentioned hereinabove, the borders which are cast in type casting machines at times vary in thickness from 1/1000 to 5/1000 of an inch from standard, and, as a result thereof, standard gauges do not always give a setting for accurately miterring the borders and the like. In order to overcome this disadvantageous feature, and to positively insure an accurate setting of the material to be mitered, I have provided simple, efficient and reliable means for accurately setting in a minimum amount of time material to be mitered. This setting means includes two cooperating members 29 and 30, probably best shown in Figures 5 and 6 in which the parts are on an enlarged scale. The member 29 has a front face 31 which cooperates with the front retaining gauge 26 in the application shown in Figures 1, 2 and 7 to 10 inclusive. It also has a side face 32 which cooperates with one end of a group of borders or slugs 33 used in determining a proper zero point or setting. The member 29 also has what I choose to term interior faces 34 and 35 which are ar-

ranged at right angles with respect to each other and which respectively cooperate with interior faces 36 and 37 respectively, of the member 30. A set screw 38 is threaded into the member 29 and extends through an elongated slot 39 in one side of the triangular shaped member 30, there being a coiled spring 40 surrounding one end of the set screw 38 and being retained thereon whereby the spring 40 tends to yieldably hold the members 29 and 30 in their zero position as shown in Figure 5. It is apparent, however, that the members 29 and 30 may be given a sliding movement with respect to each other to accommodate a slug or border member 41, as shown in Figures 1 and 2 for the purpose of giving the proper setting to borders and the like to be mitered. The use of the miter gauge members 29 and 30 can best be illustrated by referring to Figures 7 to 10 inclusive. The miter gauge members 29 and 30 are first set in the corner against the front and side gauge members 26 and 27 respectively, whereupon a plurality of scrap slugs are clamped between the front gauge member or stationary jaw 26 and the movable jaw 28 with associated ends of the slugs 42 abutting and pressed up against the straight surface 32 of gauge member 29, whereupon all of the gauge and clamping members are moved longitudinally of the table 20 for cutting the opposite edges of the scrap slugs 42. This is done for determining the zero position as indicated in Figure 8. Let it be assumed that a plurality of border members of a given thickness are to be mitered. Under such circumstances a slug or border member 41 of the same thickness is inserted between faces 37 and 35 of gauge members 30 and 29 respectively, as shown in Figure 9. Such insertion of the slug or border member 41 causes a lateral movement of the gauge member 29 and likewise, a lateral movement of the group of trial slugs 42, as indicated in Figure 9. A guide plate 44 is then moved in a manner such that its guiding surface 45 engages and is made flush with the sawed edges of the slugs 42, as indicated in Figure 10. In said figure it will be noted that the distance between the zero line and the guide face 45 will correspond to the thickness of the border member 41. The trial slugs 42 and the gauge members 29 and 30 have now served their purpose and may be withdrawn from the table 20 and in their place may be substituted the mitering attachment as shown in Figures 3 and 4 and which includes a main body portion 46 having an angled face 47 corresponding to the angle of the engaging faces 34 and 36 of the miter gauge members 29 and 30, respectively. This body member 46 is provided with a dowel pin 48 which is received by an opening 49 in the table 20 when the front

face 50 of the body member 46 engages the front gauge member 26. A movable jaw member 51 is pivotally connected to the main body portion 46 and is provided with an angular face 52 corresponding with that of the face 47 and when brought into operative position engages one side of a bundle of borders 53 while the face 47 of the body member 46 engages the other side of said bundle or border members 53. The border members 53 in their angular position are then pressed up into engagement with the guiding surface 45 of the side guide member 44, as shown in Figure 3. The border members 53, together with the mitering attachment, are clamped between the stationary and movable jaws 26 and 28 preparatory to mitering the border members 53. With the border members 53 arranged as shown in Figure 3, the ends of the border members 53 will be cut at the proper angle to match each other and at the same time remove the minimum amount of material.

From the above description it is apparent that the gauge members 29 and 30 are used first to establish a zero point and then to set one of said gauge members by moving it a predetermined distance corresponding to the thickness of the borders to be mitered, whereupon the side guide member 44 is moved into proper position for subsequent cooperation with the border members clamped in the mitering attachment and to be mitered.

This miter gauge may be used in another manner, as illustrated in Figure 11. In such case the bundle of scrap slugs 54 is pressed up against the front gauge member 26 and the side gauge arm 27 and then cut by the saw to establish the zero point. The gauge members 29 and 30 are then moved into engagement with the sawed edges of the bundle of slugs 54 with a slug or border member 55 inserted therebetween, which slug 55 corresponds to the thickness of the borders to be mitered. The side guide member 44 is then moved into engagement with the gauge member 30 where it is secured by the set screw 56 whereupon the slug or border member 55 may be withdrawn, permitting the gauge member 29 to move into the dotted line position shown in Figure 11. The bundle of slugs 54 may now be removed and the mitering attachment 46 applied as before, with the ends of the borders to be cut pressed into engagement with the straight guiding surfaces 32 of the gauge member 29, whereupon after the border members are clamped the latter may be cut and trimmed at the proper angle for matching the beveled surfaces and wasting a minimum amount of material.

The side guide member 44 is provided with an elongated slot 57 through which the

set screw 56 extends and also is provided with a groove 58 which receives a longitudinally extending tongue 59 on the bracket member 60 which is secured to the table 20 by a set screw 61. A slot 62 in the overhanging end portion 63 of the bracket 60 receives the stud 61. The stud 56 for clamping the side guide member 44 in position extends and is screwed into the bracket 60. The guide member 44 and bracket 60 may be removed as a unit without changing the adjustment by simply loosening the screw 61.

By means of the mechanism hereinabove described border members and the like may be accurately trimmed regardless of their thickness and their variation in thickness from a standard thickness. Furthermore, the standard graduated miter gauges, which at times will not give a proper setting because of the variation in thickness of the border members to be cut varying from the standard thickness, can be eliminated.

It is my intention to cover all modifications of the invention falling within the spirit and scope of the following claims.

I claim:

1. In a composing room saw, gauge means for accurately setting border material to be mitered, including two relatively movable members between which a border member of the thickness to be mitered may be inserted for determining the ultimate line along which the border material will be mitered.

2. In a composing room saw, gauge means for accurately setting border material to be mitered, including two relatively movable yieldably connected members between which a border member of the thickness to be mitered may be inserted for determining the ultimate line along which the border material will be mitered.

3. In a composing room saw, side guide means, gauge means cooperating therewith for accurately setting border material to be mitered, including two relatively movable members between which a border member of

the thickness to be mitered may be inserted for determining the ultimate line along which the border material will be mitered.

4. In a composing room saw, side guide means, gauge means cooperating therewith for accurately setting border material to be mitered, including two relatively movable yieldably connected members between which a border member of the thickness to be mitered may be inserted for determining the ultimate line along which the border material will be mitered.

5. In a composing room saw, gauge means for accurately setting border material to be mitered, including two cooperating members which may be moved relatively to each other by a border member an amount corresponding to the thickness of the border member to be mitered for determining the ultimate line along which the border member will be mitered.

6. In a composing room saw, guide means for accurately setting border material to be mitered, including two relatively movable members having cooperating faces extending at the same angle and between which a border member of the thickness to be mitered may be inserted for determining the ultimate line along which the border material will be mitered.

7. In a composing room saw, front guide means, side guide means, a side guide member, and gauge means cooperating with said front and side guide means and member for accurately setting border material to be mitered, including two relatively movable members which are located by engagement with said front guide means and said side guide means and between which two relatively movable members a border member of the thickness to be mitered may be inserted for determining with said guide member the ultimate line along which the border material will be mitered.

Signed at Milwaukee, Wisconsin, this 21st day of February, 1922.

EDWARD CHESHIRE.